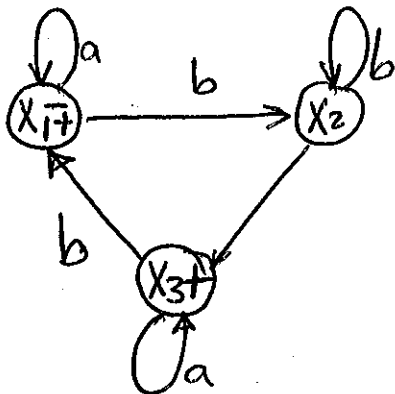


Formal Languages and Automata Theory
Answer the following questions $\Sigma = \{a, b\}$

Quiz Three

Time : 10 Minutes

Given the following DFA for the regular expression r , draw DFA for regular expression r^* .



$$Z_1 = X_1$$

$$\text{if } a \text{ } X_1 = Z_1$$

$$b \text{ } X_2 = Z_2$$

$$\text{in } Z_2 \text{ if } a \text{ } X_3 \text{ or } X_1 = Z_3$$

$$\text{if } b \text{ } X_2 = Z_2$$

$$\text{in } Z_3 \text{ if } a \text{ } X_3 \text{ or } X_1 = Z_3$$

$$b \text{ } X_1 \text{ or } X_2 = Z_4$$

$$\text{in } Z_4 \text{ if } a \text{ } X_1 \text{ or } X_3 = Z_3$$

$$\text{if } b \text{ } X_2 = Z_2$$

